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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MARIAM, DANIEL G

ART UNIT PAPER NUMBER

2621

DATE MAILED: 02/13/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/672,450

Applicant(s)

KAGLE ET AL.

Examiner

DANIEL G MARIAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

1. In response to the Office Action mailed on September 11, 2003 applicants have submitted an amendment filed December 1, 2003 amending claims 1-27; and arguing to traverse the rejection of pending claims 1-27.

Response to Arguments

2. Applicants' arguments, see pages 10-11, filed December 1, 2003, with respect to the rejection(s) of claim(s) 1-27 under 35 U.S.C 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sullivan (US Patent Numbers: 4,764,971 and 6,389,417) which will be discussed in the rejection below.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 10 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Shin, et al. (6,389,417).

With regard to claim 1, Shin, et al. discloses a method for processing an image (See for example, Fig. 2 and 3), comprising: capturing an image (item 20, in Fig. 2); dividing the captured image into a plurality of image segments (item 22, in Fig. 2; and col. 4, lines 56-57); performing image processing, i.e., analysis, on each of the plurality of image segments (See item

24, in Fig. 2; and col. 4, lines 57-58); and storing each of the plurality of image segments (See item 26, in Fig. 2; and col. 4, lines 58-59).

Claim 10 is rejected the same as claim 1. Thus, argument analogous to that presented above for claim 1 is applicable to claim 10. Shin, et al. further discloses a computer-readable medium having computer-executable instructions stored thereon for performing the steps recited in the claim (See for example Fig. 1).

Claim 19 is rejected the same as claim 1 except claim 19 is an apparatus claim. Thus, argument similar to that presented above for claim 1 is equally applicable to claim 19.

Additionally, applicants' attention is further invited to col. 3, lines 3-19.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3-4, 10, 12-13, 19, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Sullivan (4,764,971).

With regard to claim 19, Sullivan discloses a generic image processing apparatus (See Figure 1), comprising: an image sensor, i.e., scanner, that captures an image (See items 10-12, in Fig. 1; and col. 7, lines 7-11); a processor, i.e., GLRT image segmentation apparatus, that divides, i.e., segments, the captured image into a plurality of image segments (See item 14, in Fig. 1; and col. 7, lines 11-16), and performs image processing on each of the plurality of image segments (See item 20, in Fig. 1; and col. 16-19); and a storage medium, i.e., output device, such as CRT display or hard copy generator, that stores each of the processed image segments (See

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item 22, in Fig. 1). The image processing apparatus of Sullivan inherently requires a storage medium to store the processed image segments because the displaying apparatus would not be able to display the processed image segment without storing them first.

Claim 1 is rejected the same as claim 19 except claim 1 is a method claim. Thus, argument similar to that presented above for claim 19 is equally applicable to claim 1.

Claim 3 is rejected the same as claim 21 except claim 3 is a method claim. Thus, argument similar to that presented above for claim 21 is equally applicable to claim 3.

With regard to claim 4, wherein the performing step is being performed on a first image segment when the storing step is being performed on a second image segment (See items 14, 20 and 22, in Fig. 1).

Claim 10 is rejected the same as claim 1. Thus, argument analogous to that presented above for claim 1 is applicable to claim 10. Sullivan further discloses a computer-readable medium having computer-executable instructions stored thereon for performing the steps recited in the claim (See for example, col. 7, lines 19-29).

Claim 12 is rejected the same as claim 3. Thus, argument similar to that presented above for claim 3 is equally applicable to claim 12.

Claim 13 is rejected the same as claim 4. Thus, argument similar to that presented above for claim 4 is equally applicable to claim 13.

With regard to claim 21, wherein the storage medium stores each of the processed data segments as each of the processed data segments arrives at the storage medium (See item 22, in Fig. 1).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 8-9, 11, 18, 20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan (4,764,971) in view of McCubbrey (4,484,349).

With regard to claim 2, Sullivan discloses all of the claimed subject matter as already discussed above in paragraph 6, and is incorporated by reference. Sullivan does not explicitly call for performing image processing on each of the plurality of image segments in pipeline stages. However, McCubbrey (See items 12, 14, and 16, in Fig. 1; and col. 4, lines 19-22) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching as taught by McCubbrey into the system of Sullivan, and to do so would at least minimize the time taken for processing the images.

With regard to claim 8, wherein one of the pipeline stages is divided into at least two parallel processing stages (See Fig. 1; and col. 7, lines 1-13 of McCubbrey).

With regard to claim 9, wherein the performing step comprises: performing at least a portion of the image processing in at least two parallel image processing stages (See Fig. 1 of McCubbrey).

Claim 11 is rejected the same as claims 2. Thus, argument analogous to that presented above for claim 2 is equally applicable to claim 11.

Claim 18 is rejected the same as claims 9. Thus, argument analogous to that presented above for claim 9 is equally applicable to claim 18.

Claim 20 is rejected the same as claim 2 except claim 20 is an apparatus claim. Thus, argument similar to that presented above for claim 2 is equally applicable to claim 20.

Claim 23 is rejected the same as claim 8 except claim 23 is an apparatus claim. Thus, argument similar to that presented above for claim 8 is equally applicable to claim 23.

9. Claims 5-7, 14-16, 22, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan (4,764,971) in view of Ise, et al. (5,140,647).

With regard to claim 5, Sullivan discloses all of the claimed subject matter as already discussed above in paragraph 6, and is incorporated by reference. Sullivan does not explicitly call for dividing the image into a plurality of image segments that overlap one another.

However, Ise, et al. (col. 4, lines 47-48; and col. 13, lines 24-27) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching as taught by Ise, et al. into the system of Sullivan, if for no other reason than to create image segments or portions that overlay one another.

With regard to claim 6, the method according to claim 1, further comprising: stitching, i.e., joining, the plurality of image segments together to restore the image after the performing step (See for example, item 23, in Fig.3; and col. 2, lines 2-9 of Ise, et al).

With regard to claim 7, the method according to claim 6, wherein the stitching step comprises: stitching the plurality of image segments together sequentially following the performing step (See for example, Figs. 3 and 18 of Ise, et al).

Claims 14, 15, and 16 are rejected the same as claims 5, 6, and 7 respectively. Thus, arguments analogous to those presented above for claims 5, 6, and 7 are respectively applicable to claims 14, 15, and 16.

Claim 22 is rejected the same as claim 6 except claim 22 is an apparatus claim. Thus, argument similar to that presented above for claim 6 is equally applicable to claim 22.

With regard to claim 24, the method according to claim 1, further comprising: storing image file information, wherein the image file information corresponds to the plurality of image segments for a stored image (See for example, item 9, in Fig.1 of Ise, et al); and updating the image file information that has been affected by the step of performing image processing on any one of the plurality of image segments corresponding to the stored image (See for example, col. 4, lines 35-60 of Ise, et al).

With regard to claim 25, the method according to claim 24, further comprising: modifying, i.e., correcting, at least one of the stored plurality of image segments that has been affected by the step of performing image processing on any one of the plurality of image segments corresponding to the stored image (See for example, col. 4, lines 35-60 Ise, et al).

Claims 26 and 27 are rejected the same as claims 24 and 25 respectively. Thus, arguments analogous to those presented above for claims 24 and 25 are respectively applicable to claims 26 and 27.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan and Ise, et al. as applied to claims 5-7, 14-16, 22, and 24-27 above, and further in view of McCubrey (4,484,349).

With regard to claim 17, Sullivan (as modified by Ise, et al) discloses all of the

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claimed subject matter as already discussed above in paragraph 9, and is incorporated by reference. Sullivan does not explicitly call for wherein one of the pipeline stages is divided into at least two parallel processing stages. However, McCubbrey (See Fig. 1; and col. 7, lines 1-13) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching as taught by McCubbrey into the system of Sullivan (as modified by Ise, et al), and to do so would allow the processing of the images at high speed.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

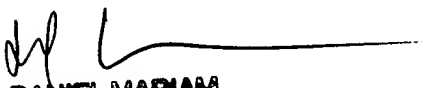
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 4,541,116 and 6,614,939.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G MARIAM whose telephone number is 703-305-4010. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LEO BOUDREAU can be reached on 703-305-4607. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DANIEL MARIAM
PRIMARY EXAMINER
February 5, 2004